



*Advisory Board Quarterly Meeting  
Fourth Quarter FY08*

Presented to  
District Energy Advisory Board

August 21, 2008



**Metro Nashville**  
**DISTRICT ENERGY SYSTEM**

# Agenda

1. Call to Order
2. Election of Chair & Vice Chair
3. Review & Approval of Previous Meeting Minutes
4. Summary of Performance
5. Natural Gas Purchasing Up-Date
6. Financial Report: 3<sup>rd</sup> Quarter FY08
7. FY2009 Budget Status Report
8. Capital Projects Review
9. Customer Contract Capacity Reviews
10. Other Board Member Items
11. Adjourn



**Metro Nashville**  
DISTRICT ENERGY SYSTEM




- 1. Call to Order**
- 2. Election of Chair & Vice Chair**
- 3. Review and Approval of Previous Meeting Minutes**



**Metro Nashville**  
DISTRICT ENERGY SYSTEM

## 4. Summary of Performance

Contractor (CNDE) is in compliance with their contractual obligations for FY08.

-  Excellent Performance – No Improvement Necessary
-  Satisfactory Performance – Some Improvement Could Be Made
-  Poor Performance – Much Improvement Necessary



# Summary Outline

## 1. Customer Cost Comparison

## 2. Operations

- Steam: Sales, Sendout, Losses and HDD 
- Chilled Water: Sales, Sendout, Losses and CDD 

## 3. Performance Measurement

- Steam: Fuel, Electricity, Water 
- Chilled Water: Electricity, Water 

## 3. Water Treatment

## 4. EGF Walkthrough

## 5. EDS Walkthrough



## Summary Table 4: Customer Cost Comparison for FY07 and FY08

	Steam (\$ millions)			Chilled Water (\$ millions)		
	FY07	FY08	% Diff.	FY07	FY08	% Diff.
Private	\$2.631	\$2.289	-13.0%	\$3.832	\$3.890	1.5%
State	\$3.138	\$2.866	-8.7%	\$3.116	\$3.200	2.7%
Metro	\$4.451	\$3.456	-22.4%	\$3.553	\$3.401	-4.3%
New Customers	\$0.692	\$0.532	-23.1%	\$1.304	\$1.319	1.2%
Aggregate	\$10.220	\$8.611	-15.7%	\$10.501	\$10.491	<0.1%

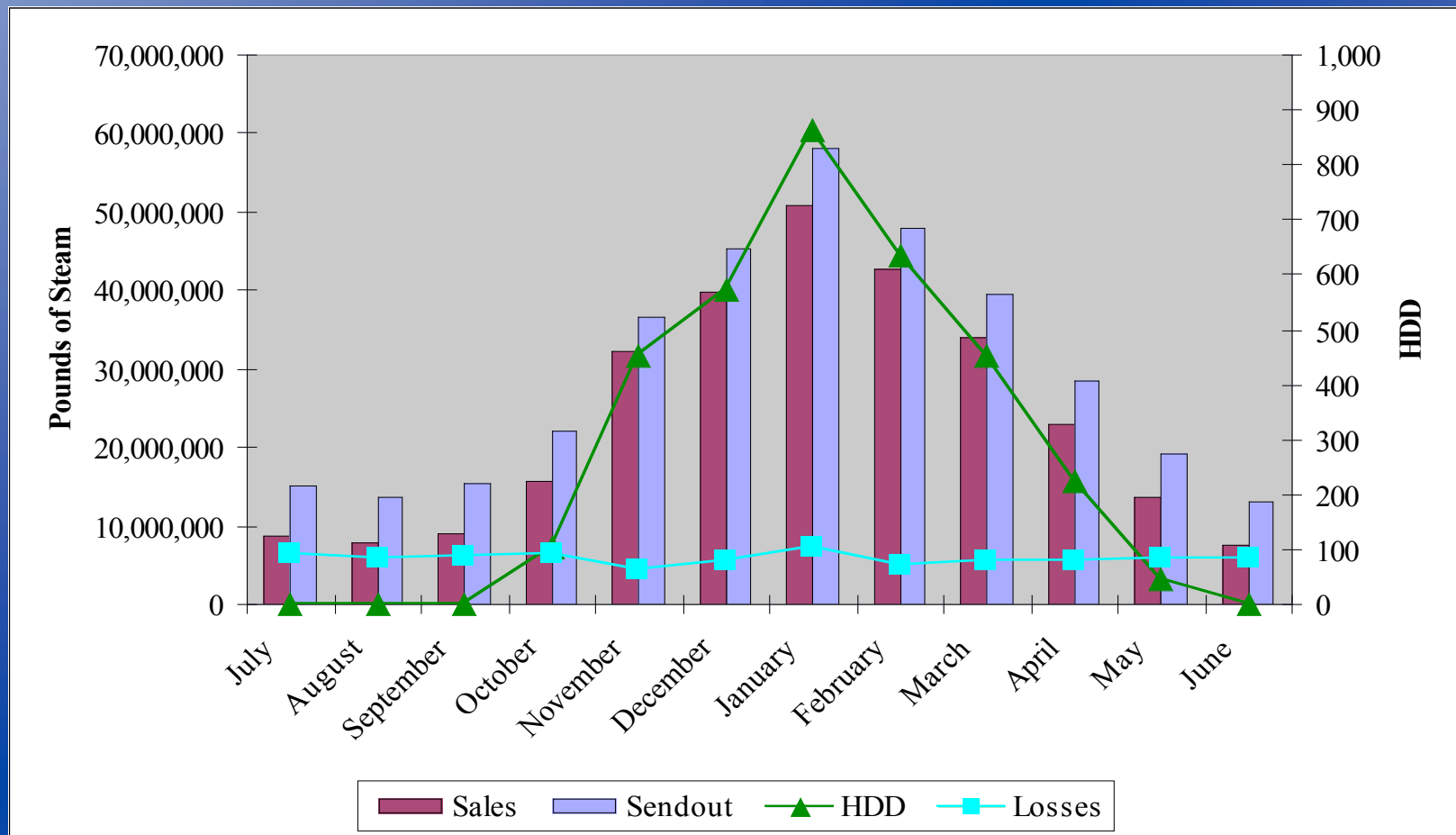
Includes MFA allocated to Metro Buildings (pre-True-up)





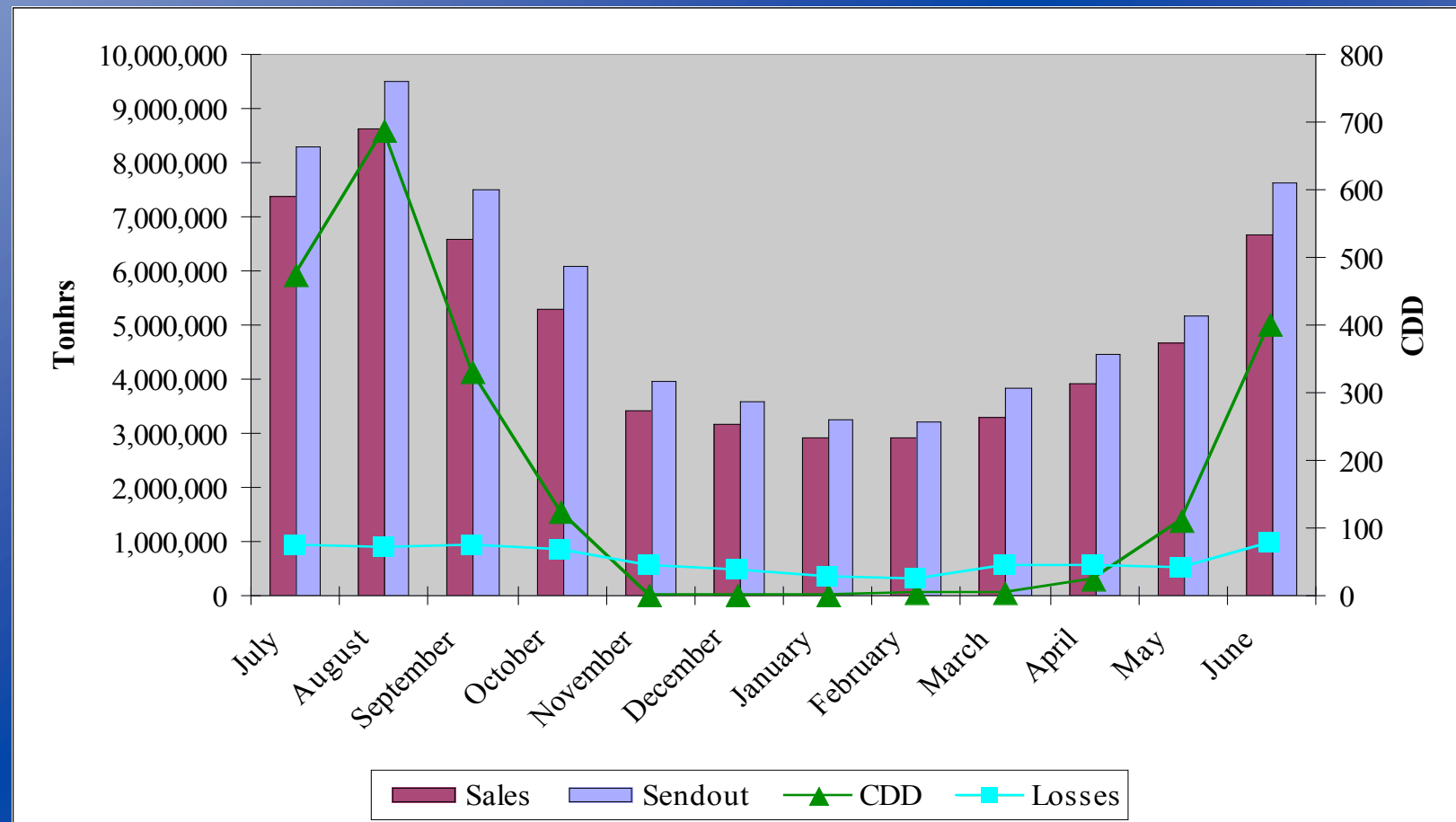
**Metro Nashville**  
DISTRICT ENERGY SYSTEM

## FY08 Operations: Steam





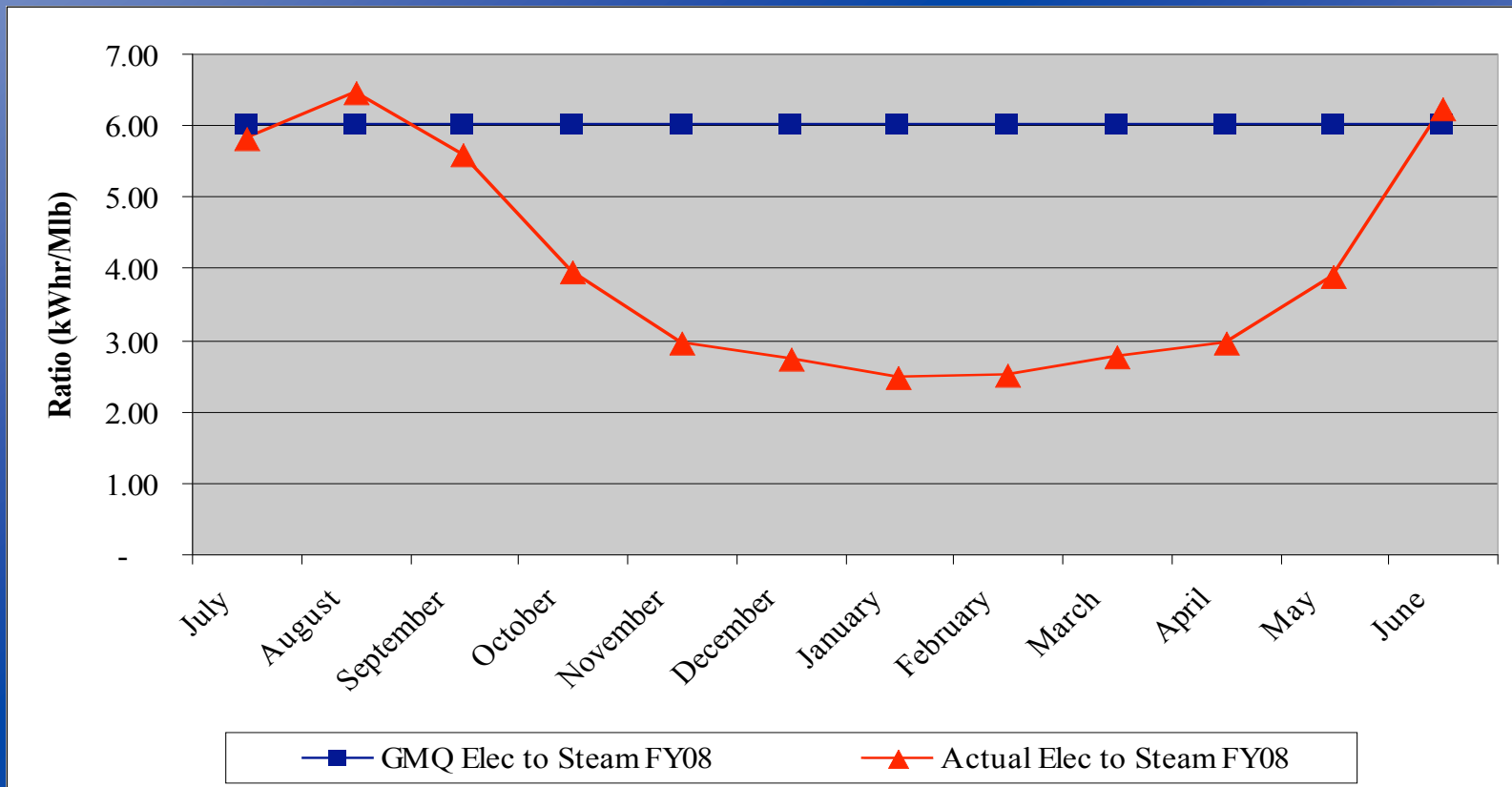
## FY08 Operations: Chilled Water





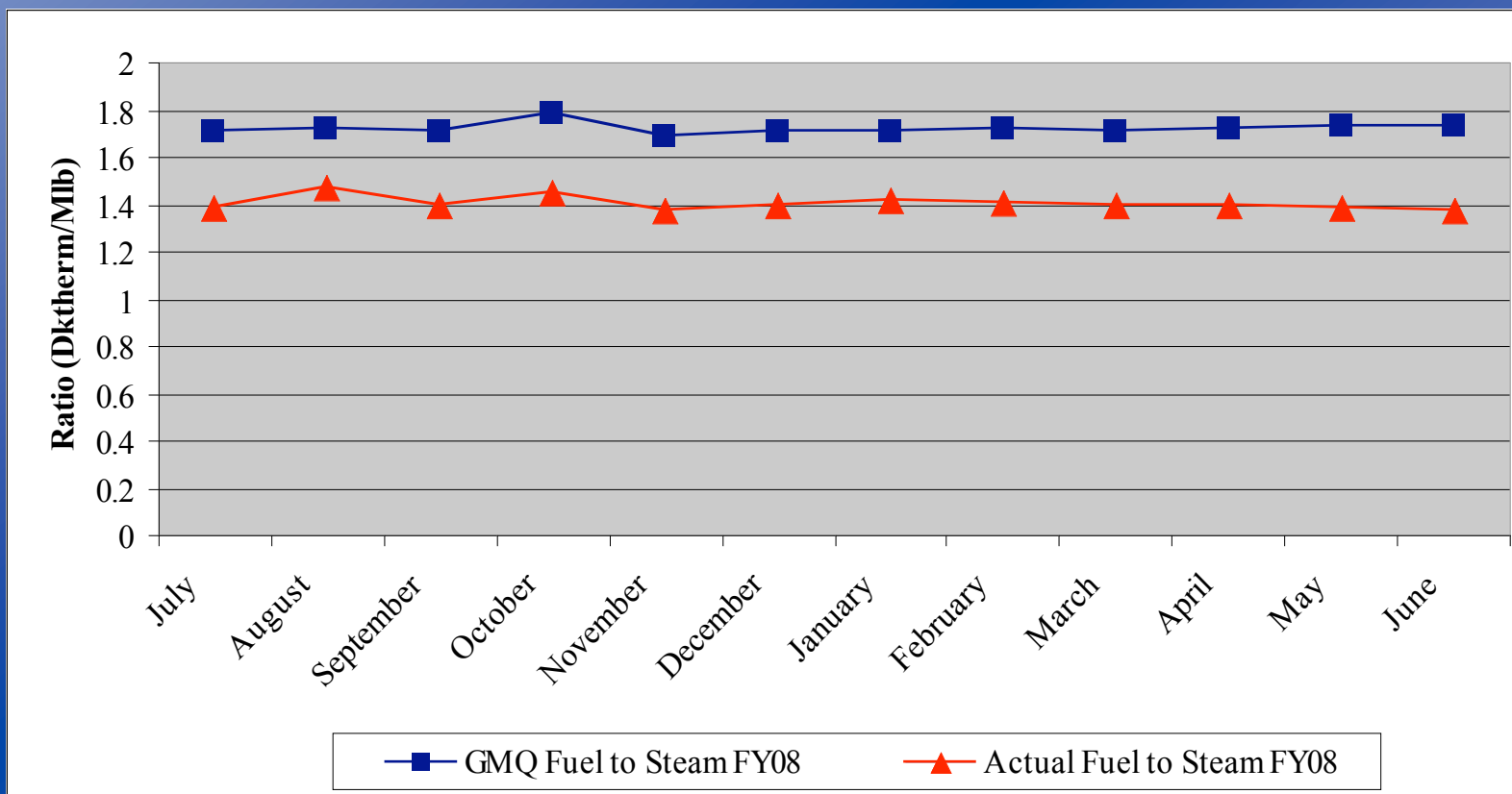


## Performance Measurement FY08: Steam Electric Conversion





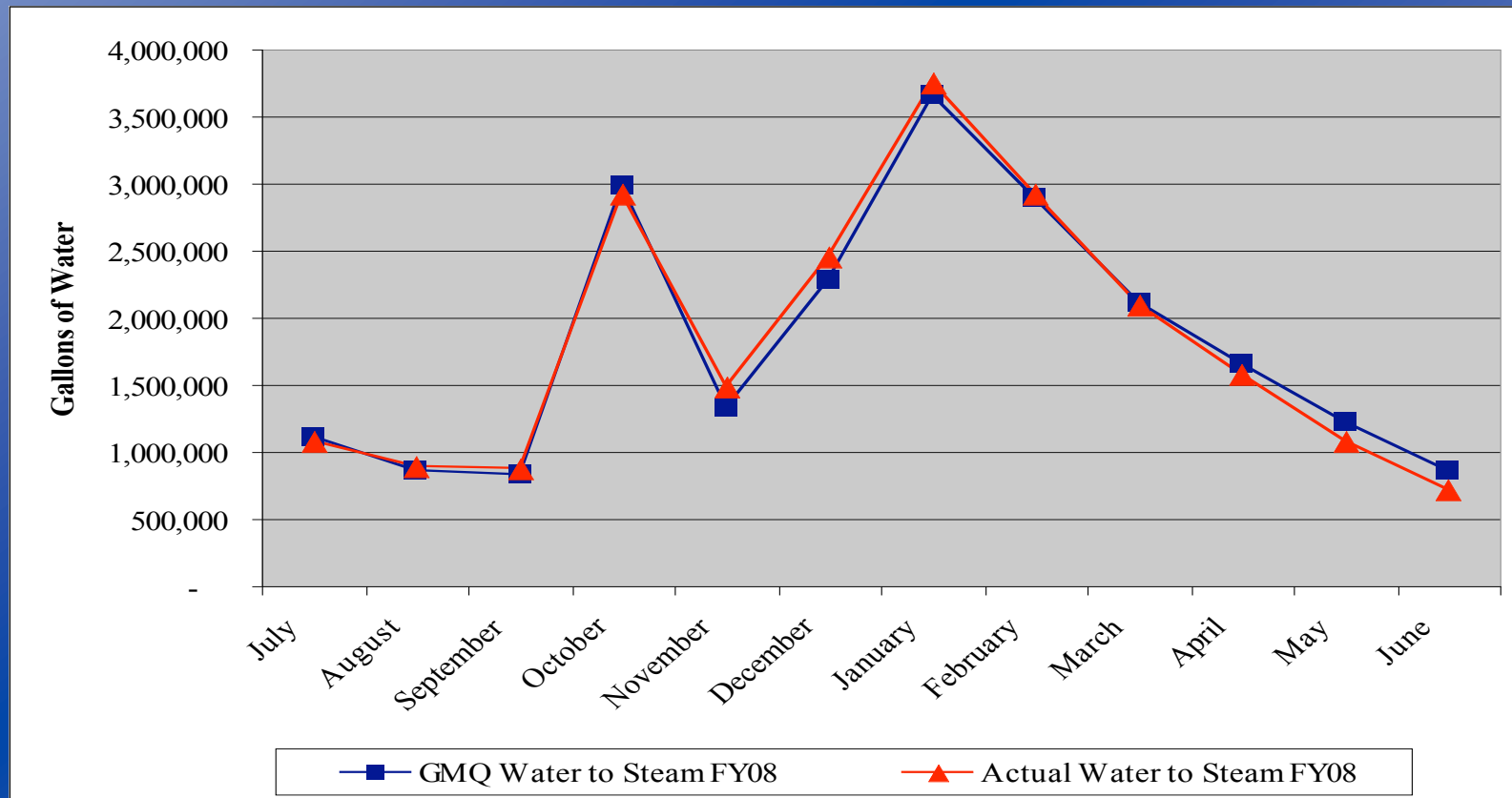
## Performance Measurement FY08: Steam Plant Efficiency





**Metro Nashville**  
DISTRICT ENERGY SYSTEM

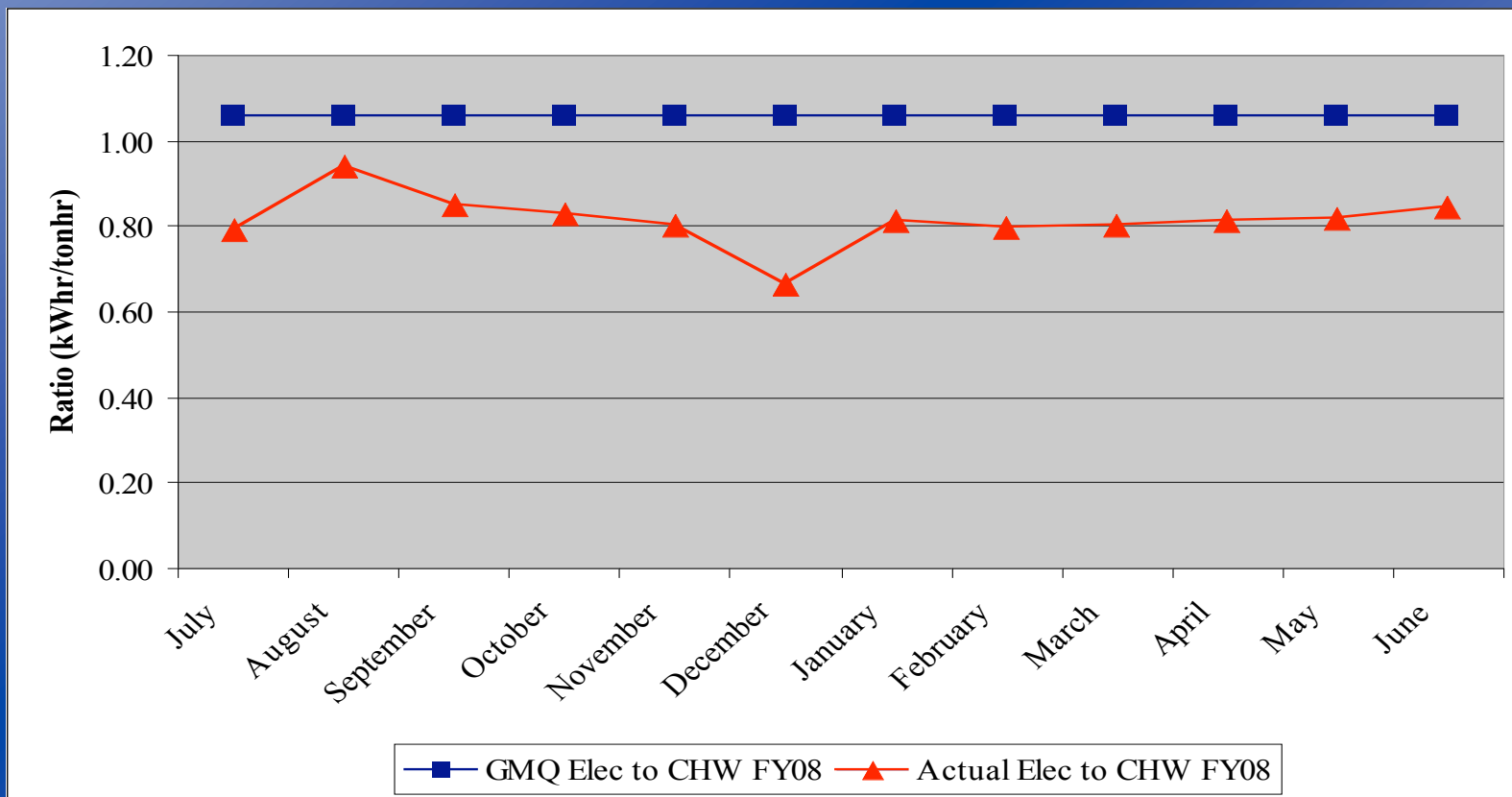
## Performance Measurement FY08: Steam Water Conversion





## Performance Measurement FY08: Chilled Water

### Electric Conversion

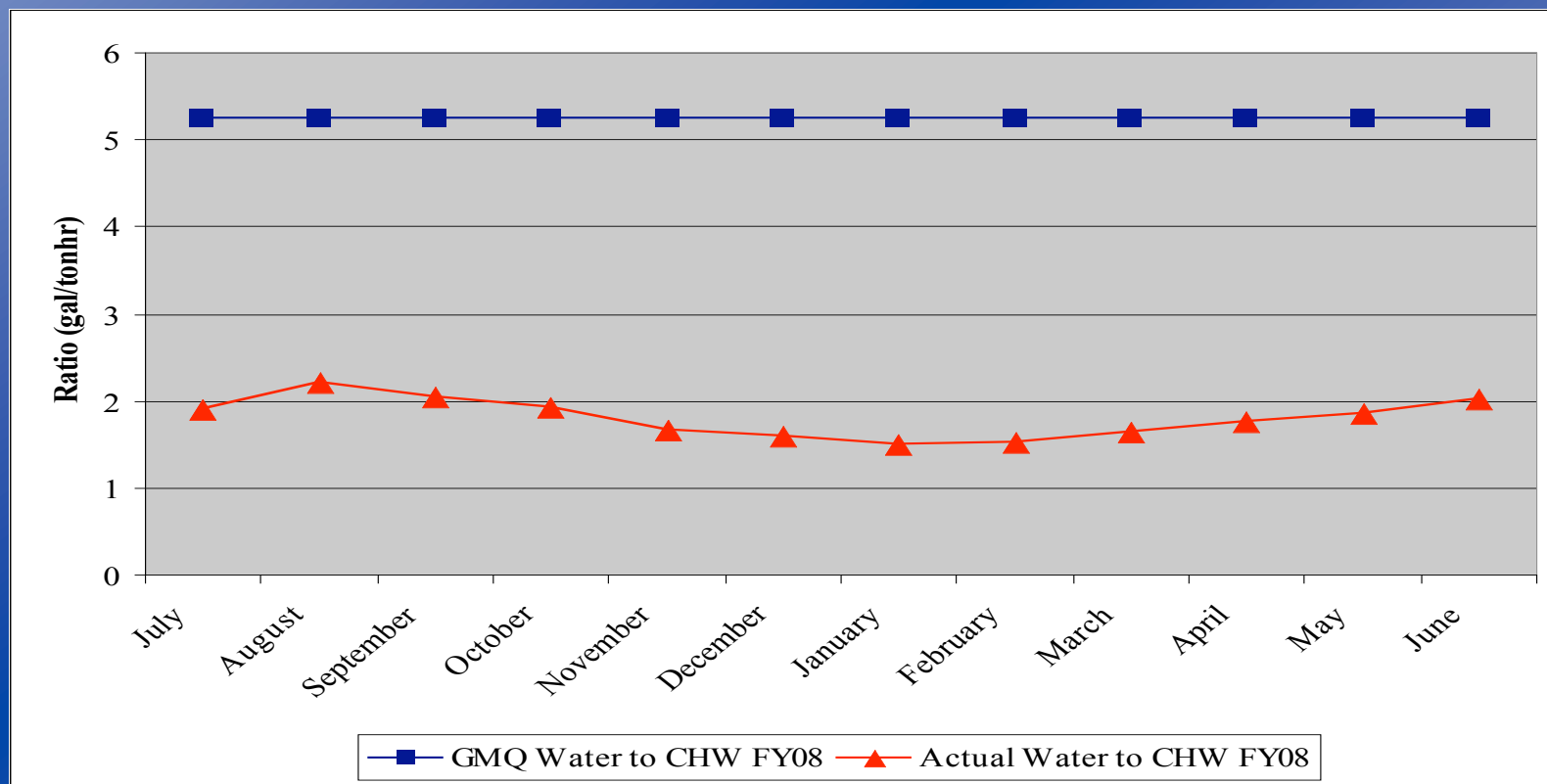




**Metro Nashville**  
DISTRICT ENERGY SYSTEM

## Performance Measurement FY08: Chilled Water

Water Conversion





## Water Treatment

- Steam/Condensate

- Corrosion ●

- Hardness ●

- Chlorine/Sulfite ●

- Condensing Water

- Conductivity ●

- Biologicals ●

- Chilled Water

- Hardness ●

- Corrosion ●

- Biologicals ●





## EGF Walkthrough

### Quarterly Inspection Process

- Equipment Maintenance ●
- Operations ●
- Electrical ●
- Housekeeping ●
- Building Structure ●
- Building Exterior and Grounds ●



## EDS Walkthrough

### Quarterly Inspection Process

- Manhole/Tunnel Housekeeping ●
- Maintenance Items
  - Insulation Repair/Replacement ●
  - Water Infiltration ●
  - Corrosion of Structural Metal Components ●
- Safety Items ●



**Metro Nashville**  
DISTRICT ENERGY SYSTEM

## **5. Natural Gas Purchasing Up-date**

### **Natural Gas Purchasing Review**

#### **Table 5: FY08 Gas Spending & Budget Comparison**

**Actual Gas Costs for FY08**

**Projected Gas Costs for FY09**

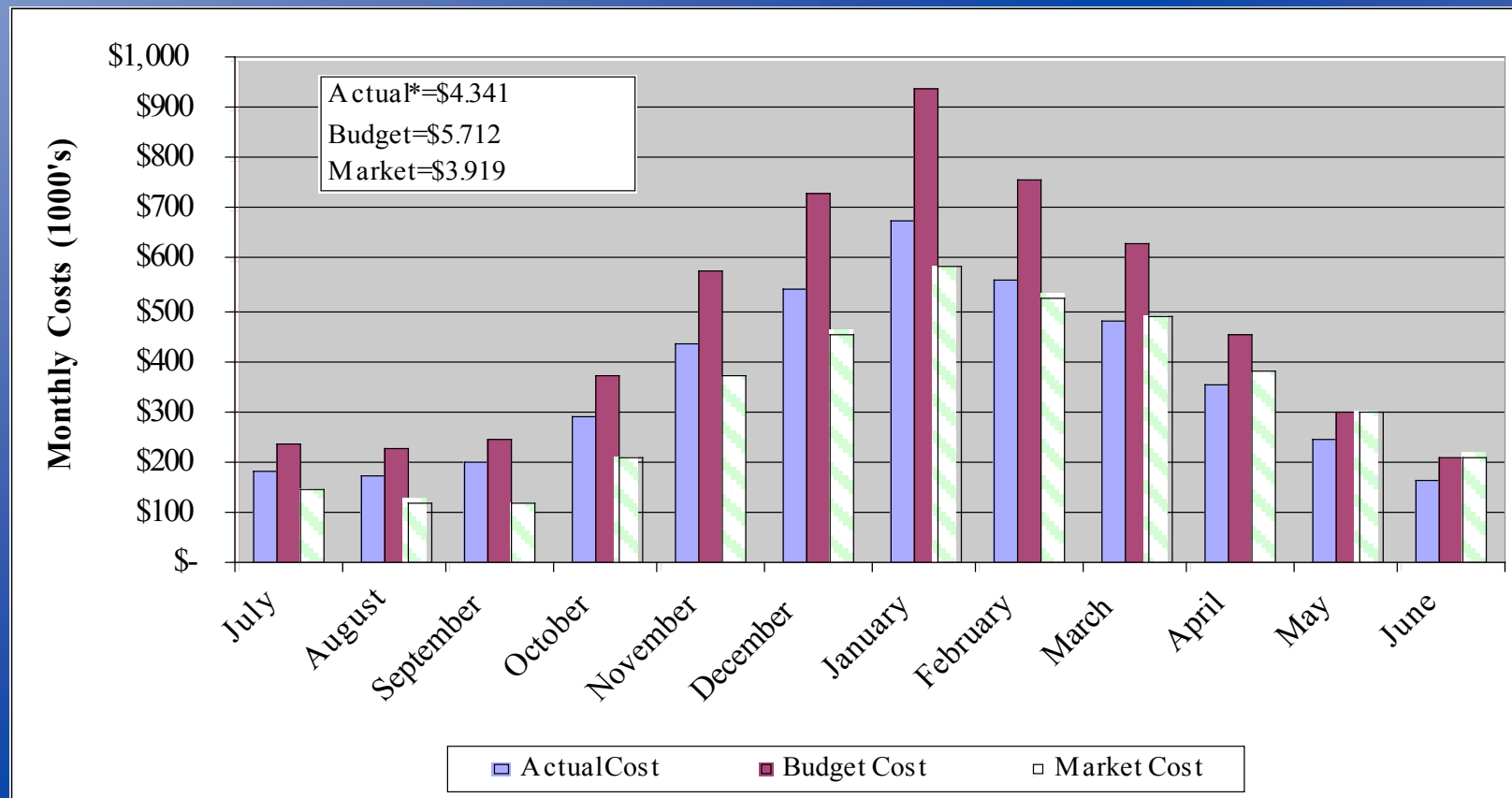


**Table 5: FY08 Gas Spending & Budget Comparison**

		<b>Actual FY08 To date (June 30)</b>	<b>Budget FY08</b>
Steam Sendout (Mlbs)		354,674	412,022
Fuel Use (Dth)	●	497,244	611,853
Plant Eff (Dth/Mlb)	●	1.402	1.485
Total Gas Cost	●	\$4,716,045	\$7,099,510
Unit Cost of Fuel (\$/Dth)	●	\$9.484	\$11.514



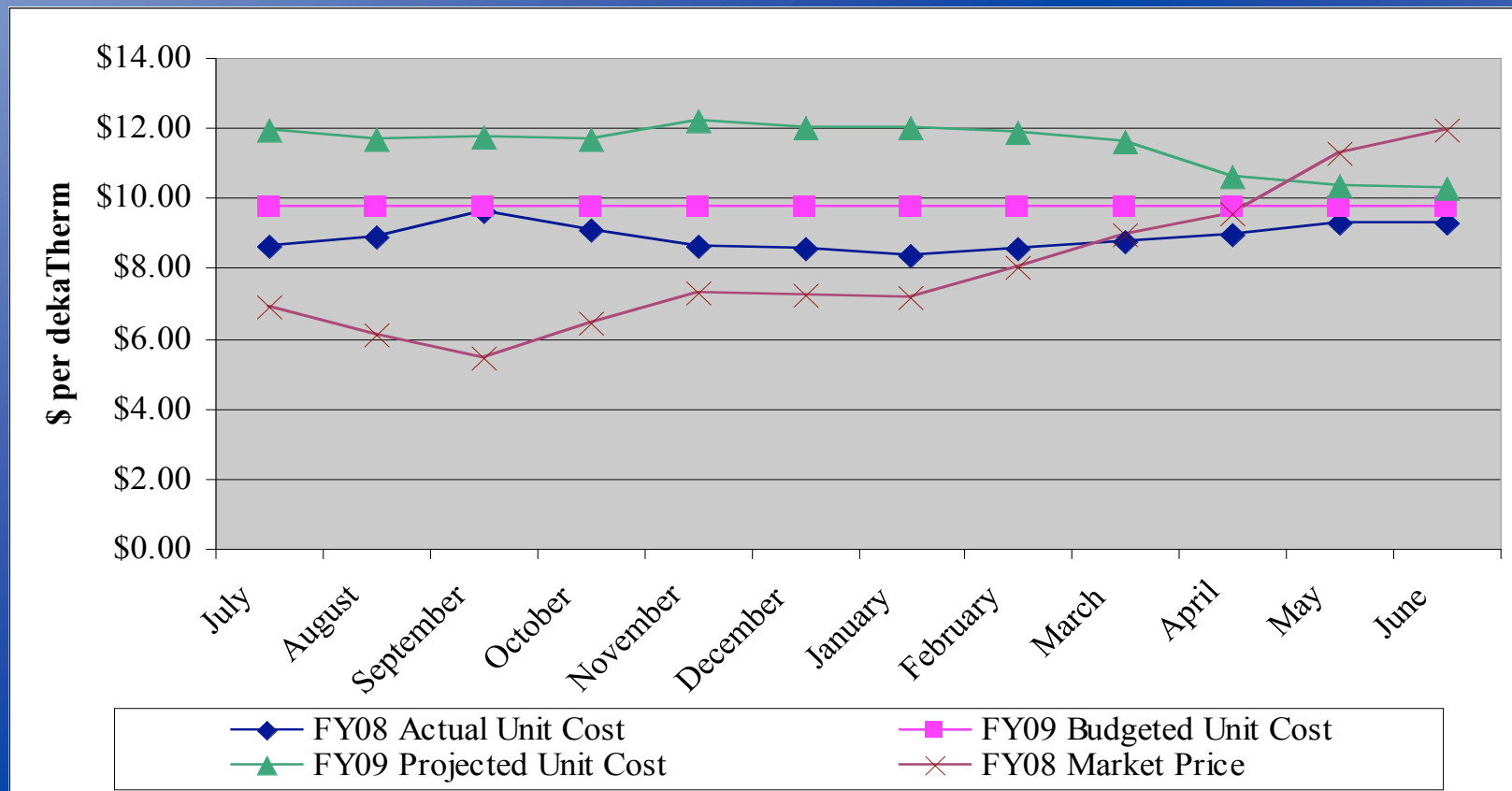
## Actual Gas Costs for FY08



\*Actual costs are not all-inclusive, but reflect only purchased fuel costs.



## Projected Gas Cost Comparison for FY09







## 6. Financial Reports: FY08

Item	FY08 Budget	FY08 Post-True up	% Difference to Budget
* FOC: Basic	\$ 3,739,971	\$ 3,739,971	0.00%
* FOC: 9th Chiller	\$ 35,044	\$ 35,044	0.00%
* FOC: Change Order 6A	\$ 69,187	\$ 69,187	0.00%
* FOC: Change Order 6B	\$ 60,571	\$ 60,571	0.00%
**Chemicals	\$ 156,500	\$ 217,884	39.22%
**Engineering	\$ 55,401	\$ 21,160	-61.81%
Insurance	\$ 41,200	\$ 29,850	-27.55%
Marketing: CEPS Sales Activity	\$ 27,000	\$ -	-100.00%
Metro Marketing	\$ 53,730	\$ 33,027	-38.53%
Incentive Payments	\$ 29,200	\$ 27,801	-4.79%
Project Administration	\$ 25,640	\$ -	-100.00%
**Metro Incremental Cost	\$ 617,560	\$ 505,605	-18.13%
**Water/Sewer	\$ 681,640	\$ 469,390	-31.14%
**Natural Gas/Propane	\$ 7,099,510	\$ 4,854,177	-31.63%
**Electricity	\$ 4,693,460	\$ 4,014,589	-14.46%
* EDS Repair & Improvement	\$ 166,435	\$ 161,709	-2.84%
* EDS Surcharge	\$ 66,463	\$ -	-100.00%
<b>* Sub-total Operations</b>	<b>\$ 17,618,512</b>	<b>\$ 14,239,965</b>	<b>-19.18%</b>
2002 Bonds	\$ 4,297,569	\$ 4,362,377	1.51%
2005 Bonds	\$ 629,838	\$ 629,837	0.00%
FY07 Projects	\$ 227,769	\$ 227,800	0.01%
FY08 Projects	\$ -	\$ -	n.a.
Debt Service Interest Revenue	\$ -	\$ -	n.a.
Oper. Reserve Funding Deposit	\$ 191,460	\$ 190,961	-0.26%
<b>* Sub-total Debt Service</b>	<b>\$ 5,346,635</b>	<b>\$ 5,410,975</b>	<b>1.20%</b>
<b>* Overstatement of FOC's</b>	<b>\$ 30,243</b>		
<b>* Total Expenses</b>	<b>\$ 22,995,390</b>	<b>\$ 19,650,940</b>	<b>-14.54%</b>
<b>Customer Revenues</b>	<b>\$ 20,561,192</b>	<b>\$ 17,953,792</b>	<b>-12.68%</b>
<b>Project Admin. Revenue</b>	<b>\$ 25,640</b>		
<b>True up Credits to Customers</b>		<b>\$ (493,613)</b>	
<b>Total Metro Funding Amount</b>	<b>\$ 2,408,558</b>	<b>\$ 2,190,761</b>	<b>-9.04%</b>

\* Note: FY08 Budget used the 3% Escalator for the final budget instead of the 2.2% overstating Budgeted Total FOC's by \$30,243: i.e. \$22,995,400.

\*\* Items Adjusted during True-up



# FY2009 Budget Status Report

## Proposed Budget

Item	FY08 Actual Costs Post-True up	FY09 Budget	% Difference to Budget
FOC: Basic	\$ 3,739,971	\$ 3,852,170	3.00%
FOC: 9th Chiller	\$ 35,044	\$ 36,100	3.01%
FOC: Change Order 6A	\$ 69,187	\$ 71,260	3.00%
FOC: Change Order 6B	\$ 60,571	\$ 62,390	3.00%
**Chemicals	\$ 217,884	\$ 156,510	-28.17%
**Engineering	\$ 21,160	\$ 40,000	89.04%
Insurance	\$ 29,850	\$ 42,440	42.18%
Marketing: CEPS Sales Activity	\$ -	\$ 27,000	n.a.
Metro Marketing	\$ 33,027	\$ 52,890	60.14%
Incentive Payments	\$ 27,801	\$ 30,150	8.45%
Project Administration	\$ -	\$ 22,090	n.a.
**Metro Incremental Cost	\$ 505,605	\$ 585,420	15.79%
**Water/Sewer	\$ 469,390	\$ 681,600	45.21%
**Natural Gas/Propane	\$ 4,854,177	\$ 6,570,400	35.36%
**Electricity	\$ 4,014,589	\$ 4,437,300	10.53%
EDS Repair & Improvement	\$ 161,709	\$ 171,430	6.01%
EDS Surcharge	\$ -	\$ 68,460	n.a.
<b>Sub-total Operations</b>	<b>\$ 14,239,965</b>	<b>\$ 16,907,610</b>	<b>18.73%</b>
2002 Bonds	\$ 4,362,377	\$ 4,361,770	-0.01%
2005 Bonds	\$ 629,837	\$ 631,590	0.28%
FY07 Projects	\$ 227,800	\$ 227,800	0.00%
FY08 Projects	\$ -	\$ 220,500	n.a.
Debt Service Interest Revenue	\$ -	\$ (72,300)	n.a.
Oper. Reserve Funding Deposit	\$ 190,961	\$ 97,400	-48.99%
<b>Sub-total Debt Service</b>	<b>\$ 5,410,975</b>	<b>\$ 5,466,760</b>	<b>1.03%</b>
<b>Total Expenses</b>	<b>\$ 19,650,940</b>	<b>\$ 22,374,400</b>	<b>13.86%</b>
<b>Customer Revenues</b>	<b>\$ 17,953,792</b>	<b>\$ 19,746,600</b>	<b>9.99%</b>
<b>Project Admin. Revenue</b>		<b>\$ 22,090</b>	
<b>True up Credits to Customers</b>	<b>\$ (493,613)</b>		
<b>Total Metro Funding Amount</b>	<b>\$ 2,190,761</b>	<b>\$ 2,605,710</b>	<b>18.94%</b>

\*\* Items Adjusted during True-up



**Metro Nashville**  
DISTRICT ENERGY SYSTEM

## 7. Capital Projects Review

### Financial Summary

### Table 7: Capital Projects Summary

### Active Project Status



**Table 7: Capital Project Summary (06/30/08)**

	Spent to End of FY07	FY08 Spending	Balance at End of FY08
2002A Bond	\$3,599,629	\$81,038	\$47,036
R&I Projects	\$132,104	\$161,709	\$356,621
2005B Bond	\$7,408,748	\$253,176	\$531,153
2007 Bond	\$1,979,628	\$641,142	\$237,729
2008 Bond	\$0	\$81,181	\$2,660,742
Total	\$13,120,109	\$1,218,246	\$3,833,281



**Metro Nashville**  
DISTRICT ENERGY SYSTEM

## Active Project Status

- DES 036: 4<sup>th</sup> Ave Tunnel Fan (R&I) - in construction
- DES 041/054: Symphony CND – in construction
- DES 042: 401 Union St. CND Replacement – in closeout
- DES 045: MH 6 to MH 23 CND Replacement – in construction
- DES 046: Ryman CND – in design
- DES 047: State Tunnel CND Replacement – in closeout
- DES 049: Temp. Blr Conn. @ MH 15 – in closeout
- DES 050: MH Insulation – in constr./ongoing
- DES 052: Wildhorse CND Tempering – in construction



**Metro Nashville**  
DISTRICT ENERGY SYSTEM

## Return on Investment

- Capital Project ROI
  - Boiler O<sub>2</sub> Trim
  - Power Factor Correction Capacitor
  - Condensate Return
  - New Customers
- Funding





## 8. Customer Contract Capacity Reviews

- Most Customers Incurring TIFS
- No Demand Excursions 4<sup>th</sup> Qtr FY08
- Cordell Hull High Demand 4 of past 12 months
- Union St Hydraulics – JKP, TNT flow too high!
- Cooling Problems – Most State, CJC, AA Birch, MCH
- CNDE Excellent Responsiveness!



**Metro Nashville**  
DISTRICT ENERGY SYSTEM

**9. Other Board Member Items**

**10. Adjourn**